

REMARKS

This application has been carefully reviewed in light of the Office Action dated November 19, 2003 (Paper No. 13). Claims 32 to 50 are pending in the application, with Claims 43 to 50 having been added. Claims 32, 36 and 41 have been amended. Claims 32, 36, 47 and 49 are in independent form. Reconsideration and reexamination are respectfully requested.

In the Office Action, Claim 41 was objected to because of an informality. Specifically, the Office Action stated the term “second manufacturing factors” should be changed to “second manufacturing factories.”

In response, Claim 41 has been amended to fix the informality. Reconsideration and withdrawal of this objection are respectfully requested.

Claims 32 to 42 were rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite. Specifically, the Office Action states there is insufficient antecedent basis for “the Internet” in Claims 32 and 36.

Claims 32 to 42 were additionally rejected under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the enablement requirement. Specifically, the Office Action contends that the term “Internet” in Claims 32 and 36 is not explained in the specification. Rather, the specification explains how the “internet” is used.

In response, Claims 32 and 36 have been amended to change the term “Internet” to “internet,” which is defined at lines 5 and 6 of page 7 as a “worldwide communication means.” Accordingly, reconsideration and withdrawal of the § 112 rejections are respectfully requested.

Claim 36 was rejected under 35 U.S.C. § 102(b) over U.S. Patent No. 4,517,468 (Kemper); Claims 32, 33 and 35 were rejected under 35 U.S.C. § 103(a) over U.S. Patent No. 5,591,299 (Seaton) in view of U.S. Patent No. 5,311,562 (Palusamy) and further in view of U.S. Patent No. 5,245,554 (Tsuyama); Claim 34 was rejected under 35 U.S.C. § 103(a) over Seaton in view of Palusamy and further in view of Tsuyama and further in view of U.S. Patent No. 5,761,064 (La); Claims 37 and 40 were rejected under 35 U.S.C. § 103(a) over Kemper in view of Tsuyama; Claims 38 and 39 were rejected under 35 U.S.C. § 103(a) over Kemper in view of U.S. Patent No. 5,726,920 (Chen); and Claims 41 and 42 were rejected under 35 U.S.C. § 103(a) over Kemper in view of La. Reconsideration and withdrawal of these rejections are respectfully requested.

Independent Claim 32 as amended is directed to a manufacturing system in a factory. The manufacturing system includes industrial equipment installed in the factory for manufacturing products, and a host computer connected to an internet. The manufacturing system also includes a LAN system connecting to the industrial equipment and the host computer, wherein the host computer is connected to a remote computer placed at a remote location from the factory through the internet. The remote computer provides at least one database storing maintenance information concerning the industrial equipment, wherein the maintenance information includes both status information received from the host computer concerning the industrial equipment and response information which is used for handling a problem indicated by the status information.

A feature of the invention therefore lies in the storing of maintenance information, including both status information received from the host computer concerning

the industrial equipment and response information used for handling a problem indicated by the status information.

Seaton discloses a spray processor host system including a plurality of supervisor computers networked to each other. Each of the supervisor computers is connected to one of a plurality of spray process tools. An engineer computer monitors the plurality of supervisor computers. The spray processor host system can be controlled from a remote system, i.e., from local sites and worldwide. See Abstract; column 2, line 15 to column 3, line 4. However, Seaton does not disclose that the remote computer provides a database storing maintenance information. As a consequence, Seaton could not possibly describe the storing of status information concerning the industrial equipment (or spray process tools) and response information for handling the problem indicated by the status information.

Tsuyama is not seen to remedy the deficiencies of Seaton. Tsuyama discloses a quality control method for explaining the causes of failure in a product. In Tsuyama, a field serviceman records the type of the product which had a failure, the condition of the failure, parts used and the details of the repair work in a predetermined format. See column 2, lines 4 to 12. Since the failures are documented in a standard way, future generations of the product can benefit from improvements in design, evaluation of component parts, and improvement of the inspection system. See column 2, lines 20 to 26. The post-repair documentation system of Tsuyama is seen to be different from the features of the present invention, in which maintenance information relating to the industrial equipment is stored, including both status information received from the host computer

concerning the industrial equipment and response information used for handling a problem indicated by the status information.

In addition, Palusamy has been reviewed as is not seen to compensate for the deficiencies of Seaton and Tsuyama.

Allowance of Claims 32 to 35 is therefore respectfully requested.

Independent Claim 36 as amended is directed to a manufacturing system including a computer which is connected to an internet and provides a database storing information concerning industrial equipment, and a first manufacturing factory having the industrial equipment and a first LAN system capable of accessing the database through the internet. The manufacturing system also includes a second manufacturing factory, located at a remote location from the first manufacturing factory, having the industrial equipment and a second LAN system capable of accessing the database through the internet. The database provided by the computer stores maintenance information concerning the industrial equipment, the maintenance information including both status information received from the first and second LAN systems concerning the industrial equipment and response information which is used for handling a problem indicated by the status information.

As noted above, a feature of the present invention lies in the storing of maintenance information, which includes both status information concerning the industrial equipment and response information which is used for handling a problem indicated by the status information.

Kemper discloses a diagnostic system in which a central diagnostic center

receives data concerning the operating condition of remote plants, where the remote plants record certain sensor signals and transmit these sensor signals at prescheduled transmission times. See Abstract; column 1, lines 50 to 60; and Figure 1. If the sensor reading is out of range, indicating that the plant may have a problem, then the normal periodic transmission schedule is interrupted such that sensor readings are transmitted immediately or continuously so that the diagnostic center can perform an immediate analysis of the event, to prevent a dangerous condition. See column 3, lines 4 to 11.

Under certain conditions, the diagnostic center of Kemper can send back the results of the diagnosis, including plant information relating to plant status, actions to be taken by the plant operator, or any changes to be made. See column 5, lines 64 to 68. Specifically, the transmission may change certain timing parameters, such as threshold or rate limit values, in order to decrease or increase the amount of diagnostic data sent to the diagnostic center. See column 6, lines 41 to 58. Although Kemper discloses transmitting the results of a diagnosis to the plant, Kemper is not seen to disclose that the diagnostic center stores maintenance information relating to the industrial equipment, where the maintenance information includes both status information concerning the industrial equipment and response information which is used for handling a problem indicated by the status information.

Allowance of Claims 36 to 46 is therefore respectfully requested.

Newly added independent Claim 47 is directed to a manufacturing system in a factory including industrial equipment installed in the factory for manufacturing products and a host computer connected to an internet. The manufacturing system also includes a

LAN system connecting to the industrial equipment and the host computer. The host computer is connected to a remote computer placed at a remote location from the factory through the internet, where the remote computer provides at least one database storing maintenance information concerning the industrial equipment. The remote computer also includes a communication security system which inhibits unauthorized entities from accessing the database.

A feature of the present invention therefore lies in the communication security system which inhibits unauthorized entities from accessing the database of stored maintenance information.

As noted above, Seaton teaches a spray processor host system including a plurality of networked supervisor computers, where each supervisor computer is connected to one of a plurality of spray processor tools. An engineer computer monitors the plurality of supervisor computers, and the spray processor host system can be remotely controlled. However, Seaton is not seen to disclose or suggest a database storing maintenance information concerning the industrial equipment. As a consequence, Seaton could not possibly describe a communication security system which inhibits unauthorized entities from accessing a database of stored maintenance information.

In addition, Tsuyama and Palusamy have been reviewed as are not seen to compensate for the deficiencies of Seaton.

Allowance of Claims 47 and 48 is therefore respectfully requested.

Newly added independent Claim 49 is directed to a manufacturing system including a computer which is connected to an internet and provides a database storing

information concerning industrial equipment, and a first manufacturing factory having the industrial equipment and a first LAN system capable of accessing the database through the internet. The manufacturing system also includes a second manufacturing factory, located at a remote location from said first manufacturing factory, having the industrial equipment and a second LAN system capable of accessing the database through the internet. The computer provides at least one database storing maintenance information concerning the industrial equipment and includes a communication security system which inhibits unauthorized entities from accessing the database.

The prior art is not seen to disclose or to suggest the features of the present invention, more particularly, a communication security system which inhibits unauthorized entities from accessing a database that stores maintenance information concerning the industrial equipment.

As noted above, Kemper teaches a diagnostic system in which a central diagnostic center receives data concerning the operating condition of remote plants. The remote plants record certain sensor signals and transmit these sensor signals at prescheduled transmission times. Although Kemper discloses transmitting the results of a diagnosis to the plant, Kemper is not seen to disclose a communication security system which inhibits unauthorized entities from accessing the diagnostic center.

Allowance of Claims 49 and 50 is therefore respectfully requested.

Based on the foregoing remarks, independent Claims 32, 36, 47 and 49 are believed to be allowable over the applied references. Reconsideration and withdrawal of the § 102(b) and § 103(a) rejections are respectfully requested.

The other claims in the application are each dependent from the independent claims discussed above and are believed to be allowable over the applied references for at least the same reasons. Because each dependent claim is deemed to define an additional aspect of the invention, however, the individual consideration of each on its own merits is respectfully requested.

In view of the foregoing, the entire application is believed to be in condition for allowance, and such action is respectfully requested at the Examiner's earliest convenience.

Finally, as to a formal matter, the Office Action made no mention of the Information Disclosure Statement dated November 11, 2003. Applicants therefore request that the Examiner return an initialed copy of the Form PTO-1449 which accompanied the November 11, 2003 Information Disclosure Statement.

Applicant's undersigned attorney may be reached in our Costa Mesa, California, office by telephone at (714) 540-8700. All correspondence should be directed to our address given below.

Respectfully submitted,


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